



*A NIOSH Education and Research Center for
Occupational & Environmental Health & Safety*

Mountain and Plains Education and Research Center

Summary Annual Report

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Program Overview

The Mountain and Plains Education and Research Center (MAP ERC) is a joint effort of the University of Colorado Denver (UCD), Colorado State University (CSU), National Jewish Health, Denver Health and Hospital Authority, and the University of New Mexico Health Sciences Center. Housed in the Colorado School of Public Health (CSPH) in the Department of Environmental and Occupational Health, the MAP ERC helps fill an important regional need in the West (Colorado, New Mexico, Arizona, Wyoming, Montana, North Dakota and South Dakota) both by embarking on new occupational health and safety initiatives and by collaborating with neighboring Education and Research Centers. Visit us online at: <http://maperc.ucdenver.edu/>.

Nearly 50 core faculty members provide training in five fields: Occupational and Environmental Medicine Residency; Industrial Hygiene; Ergonomics; Occupational Health Psychology; and Health Physics. In 2009-2010, 29 trainees received full or partial support from the NIOSH MAP ERC. In 2010, 8 trainees graduated from our programs and joined the workforce of occupational health and safety professionals.

Center wide activities include our Pilot/Small Projects Research Program, a Diversity Recruitment Program that is integrated with our Outreach Program, Interdisciplinary and our Continuing Education Program.

Academic Program	Core Faculty	Adjunct/ Supporting Faculty	Total Trainees	NIOSH Funded Trainees	Graduates 2009 – 2010
Industrial Hygiene	12	22	18	7	4
Occupational/Environmental Medicine	23	26	4	4	2
Health Physics	6	-	17	6	1
Occupational Health Psychology	4	5	10	10	1
Ergonomics	4	7	6	2	0

Academic Programs

Occupational and Environmental Medicine Residency (E. Brigitte Gottschall MD, MSPH, Director; Cecile Rose, MD, MPH and Lee Newman, MD, MA, Co-Directors)

Twenty-three core faculty and 26 supporting faculty members contributed to clinical and research training of 4 residents in this two-year program. A joint endeavor of UCD, National Jewish Health, and Denver Health and Hospital Authority, the program provides ACGME-accredited training that includes a Masters of Public Health degree. In this past year, we experienced significant growth in our training and research activities. Faculty members have been actively involved in the creation and team-teaching of a new interdisciplinary course in occupational health and safety that is taken by all MAP ERC trainees. We have recruited new faculty members to the CSPH, enhancing the education and research in occupational toxicology and epidemiology. We have increased the opportunities for residents to participate at new practicum sites and in clinic at the Center for Occupational Health and Safety (COSH) at Denver Health and Hospital Authority.

Industrial Hygiene Training Program (Stephen Reynolds, PhD, CIH, Director; William Brazile, PhD, CIH, Co-Director)

Twelve Core Faculty and 22 Supporting Faculty members contributed to the professional and research training in Industrial Hygiene. This CSU-based program in the Department of Environmental and Radiological Health Sciences provides ABET-accredited training at the masters and doctoral level. Achievements this past year included further progress: in promoting increasing interaction between industrial hygiene students and the other trainees on the CSU and UCD campus, through shared courses, seminars, and industrial site visits; development of two new courses to address needs for multidisciplinary training and in the management

aspects of occupational and environmental health; and expanded participation in the Colorado School of Public Health CSPH.

Ergonomics Training Program (John Rosecrance, PhD, PT, CPE, Director; David Gilkey PhD, DC, CPE, Co-Director; Peter Chen, PhD, Co-Director)

Masters of Science and doctoral degrees are offered by four core and seven supporting faculty members. This highly interdisciplinary program is structured to provide competency toward the goal of helping graduates become Certified Professional Ergonomists or Certified Ergonomics Associates. By design, the program has strong linkages with occupational health psychology, health physics and industrial hygiene, through shared course work, seminars, site visits, and research. In 2009-2010, we developed additional distance learning offerings in ergonomics that are available to students on either campus and in the community. Faculty members contributed to the development of our new interdisciplinary course, and partnered with neighboring ERCs in holding the second “ERC Interdisciplinary Forum on Measurement Systems for Occupational Health and Safety Research.”

Occupational Health Psychology Training Program (Peter Chen, PhD, Director; Lorann Stallones, MPH, PhD, Co-Director; John Rosecrance, PhD, PT, CPE, Co-Director)

The field of Occupational Health Psychology concerns itself with applying psychology to improving the quality of work life and to protecting and promoting the safety, health and well being of workers. This training program is one of only two such programs offered by NIOSH ERCs. It provides graduate education in a highly interdisciplinary model, offering education not only in psychology, but also in ergonomics, industrial hygiene, and epidemiology. Based at CSU, four core faculty and five supporting faculty trained Masters of Science and doctoral students. Among last year’s achievements: they coordinated a monthly “brown-bag” conference and participated in the development of our new interdisciplinary course as well as a new, experimental course in undergraduate occupational health psychology at CSU.

Health Physics Training Program (Thomas Johnson, PhD, Director)

Facing a critical shortage in the supply of qualified radiation safety professionals, especially in our region, the Health Physics training program at CSU has been able to continue to increase its number of funded positions because of MAP ERC support. Last year, the six core faculty members in this ABET-accredited program trained both Masters of Science and doctoral students, and contributed to the development of our new interdisciplinary course taken by all MAP ERC supported trainees. This program continued to lead many of the MAP ERC interdisciplinary site visits, including visits to Los Alamos National Laboratory, a uranium mill in Southern Colorado, and others.

Continuing Education

(Karen Mulloy, DO, MSCH, Dir.; David Gilkey, PhD, DC, CPE Assoc. Dir., Kenneth Scott, MPH, Asst. Dir.)

The CE program has developed new, needs-based courses in both conference format and online. These offerings draw from more than 300 occupational, environmental, health and safety related topics in the inventory of lectures provided by core and supporting faculty, plus seminars presented by visiting professors. We sponsored or co-sponsored 12 major events in 2009-2010, including: the Rocky Mountain Section-AIHA and ASSE Annual Fall Technical Conference; Rocky Mountain Academy of Occupational and Environmental Medicine Annual Conference; a Public Forum on Hydraulic Fracturing in Colorado; Workers’ Compensation Accreditation and Medical Treatment Guidelines courses in Colorado and in Montana; sessions at AIHce2010; Occupational Hygiene Society roundtable; Certified Health Physicist Review Course; Non-Ionizing Radiation Safety Course; and NRRPT Exam Review Course. A national Energy Summit concerning worker health and safety in the renewable energy sector is planned for April 2011. In sum, 1,905 continuing education trainees received 2,449 person-days of continuing education through 30 CE Courses offered live or online in 2009-2010.

Center Wide Activities

Administrative Core Promoting Interdisciplinary Coordination. A successful ERC is more than the sum of its training programs. Our 2009-10 highlights included enhancement of our use of social media to reach a more diverse audience, including: enhancement of our website; increased subscriptions (>500) to our weekly e-newsletter, “*RoadMAP*”; development of a lively MAP ERC Facebook page (to ‘friend’ us, go to Facebook: Mountain and Plains ERC), Twitter account; launch of environmental and occupational safety and health videos on our YouTube Channel (go to YouTube and enter: “csphMAPERC”). We coordinated our third all-Center retreat, this time including our External Advisory Panel, faculty, students and staff in a two-day process of refining the Center’s goals, objectives, and evaluation metrics using Logic Models. We coordinated with the CSPH to create integrated curricular offerings accessible for credit at UCD and CSU, including development of 6 new credit hours of courses in 2009-10. We coordinated faculty in creating the MAP ERC’s own UCD- and CSU-approved course “Occupational and Environmental Health Interdisciplinary Symposium” team-taught by faculty from all five disciplines. All MAP ERC-supported trainees enroll in this multidisciplinary course, which places trainees on teams to work on R2P projects with community partners, including local industries, health department, and non-profit organizations.

Diversity Recruitment (William Brazile PhD, CIH and Dominic Martinez, Diversity Program Co-Directors). In 2009-2010, 15 per cent of our NIOSH-supported students were members of minority groups. To promote greater awareness of occupational health and safety issues, training and career options, we have partnered in events including career fairs and internship programs. In May 2010, we premiered a new photojournalism project by Earl Dotter entitled “Holding Mother Earth Sacred,” which premiered at AIHce 2010, in partnership with AIHA and with the University of Colorado Denver Office of Diversity and Inclusion. The exhibit focuses on Native American Workers from four Tribal Nations, working in traditional and new energy industries.

Outreach Program (Kenneth Scott, MPH Outreach Director). Based on regional need, the Outreach Program prioritized efforts in two major arenas: Energy workers’ health and Occupational Health State Surveillance. We maintain strong collaborations (NIOSH Western States Office, oil and gas industry representatives, community environmental groups, U.S. Department of Energy, county and state agencies, and other stakeholders) to address worker and community health issues in the energy sector. We consider the promotion of occupational health surveillance throughout the west to be a top outreach priority and employ a two-pronged approach, in collaboration with our regional partners:

WestON. In recognition of the need for expanded state based occupational health surveillance the Western States Occupational Network was organized. WestON, now in its third year, is a joint project between MAP ERC, the Council of State and Territorial Epidemiologists, and the NIOSH Western States Office. The MAP ERC has been an active leader in forming this organization and in organizing each of the three meetings that have been attended by representatives from 18 of the 19 western states, four states ERCs, four NIOSH agricultural centers, NIOSH Surveillance Branch, two NIOSH regional offices, and others.

Promoting Use of Occupational Health Indicators. In order to help promote adoption of occupational health indicators as a component of state-based surveillance systems, the MAP ERC has prepared and presented state-specific white papers. In Colorado, this helped the state health department obtain a CDC occupational health surveillance award. We completed a Wyoming report and have engaged stakeholders. In partnership with the Minnesota ERC, we are completing reports for North and South Dakota.

Pilot/Small Projects Research Program (John Reif, PhD, Program Director). In 2009-2010, four newly-funded projects included: Evaluation of toluene diisocyanate sampling methods; assessment of radiation dose and risk from coal power plant fly ash effluence; an ecologic assessment of pesticide and prevalence of Parkinson’s Disease; and cognitive effects of manganese exposure. Awardees from the first two years have published six peer-reviewed papers and leveraged their data to obtain career development awards.